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#10/Rage 1 of 7 4-25-01

1652

APR 1 8 2001 TECH CENTER 1600/2900

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/526,193A

DATE: 04/09/2001 TIME: 17:28:37

Input Set : A:\PTO.txt

Output Set: N:\CRF3\04092001\I526193A.raw

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4 <110> APPLICANT: Hayden, Michael R.
         Brooks-Wilson, Angela R.
 6
         Pimstone, Simon N.
 8 <120> TITLE OF INVENTION: METHODS AND REAGENTS FOR MODULATING
        CHOLESTEROL LEVELS
11 <130> FILE REFERENCE: 50110/002005
13 <140> CURRENT APPLICATION NUMBER: US 09/526,193A
14 <141> CURRENT FILING DATE: 2000-03-15
16 <150> PRIOR APPLICATION NUMBER: 60/124,702
17 <151> PRIOR FILING DATE: 1999-03-15
19 <150> PRIOR APPLICATION NUMBER: 60/138,048
20 <151> PRIOR FILING DATE: 1999-06-08
22 <150> PRIOR APPLICATION NUMBER: 60/139,600
23 <151> PRIOR FILING DATE: 1999-06-17
25 <150> PRIOR APPLICATION NUMBER: 60/151,977
26 <151> PRIOR FILING DATE: 1999-09-01
28 <160> NUMBER OF SEQ ID NOS: 287
30 <170> SOFTWARE: FastSEQ for Windows Version 4.0
32 <210> SEQ ID NO: 1
33 <211> LENGTH: 2261
34 <212> TYPE: PRT
35 <213> ORGANISM: Homo sapiens
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42 Leu Phe Ile Phe Leu Ile Leu Ile Ser Val Arg Leu Ser Tyr Pro Pro
                               40
44 Tyr Glu Gln His Glu Cys His Phe Pro Asn Lys Ala Met Pro Ser Ala
                           55
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46 Cly Thr Leu Pro Trp Val Gln Cly Ile Ile Cys Asn Ala Asn Asn Pro
47 65
                      70
48 Cys Phe Arg Tyr Pro Thr Pro Gly Glu Ala Pro Gly Val Val Gly Asn
50 Phe Asn Lys Ser Ile Val Ala Arg Leu Phe Ser Asp Ala Arg Arg Leu
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                                   105
52 Leu Leu Tyr Ser Gln Lys Asp Thr Ser Met Lys Asp Met Arg Lys Val
      115
                               120
                                                   125
54 Leu Arg Thr Leu Gln Cln fle Lys Lys Ser Ser Ser Asn Leu Lys Leu
                          135
                                              140
56 Gln Asp Phe Leu Val Asp Asn Glu Thr Phe Ser Gly Phe Leu Tyr His
                      150
                                          155
58 Asn Leu Ser Leu Pro Lys Ser Thr Val Asp Lys Met Leu Arg Ala Asp
                  165
                                      170
60 Val Ile Leu His Lys Val Phe Leu Gln Gly Tyr Gln Leu His Leu Thr
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NO. 9

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3|27|13

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/526,193A

DATE: 04/09/2001
TIME: 17:28:37

Input Set : A:\PTO.txt

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	Gln	Glu 210		Ser	Glu	Leu	Cys 215		Leu	Pro	Arg	Glu 220	Lys	Leu	Ala	Ala
66			Arg	Val	Leu	Arg 230		Asn	Met	Asp	Ile 235		Lys	Pro	Ile	Leu 240
	225 Arg	Thr	Leu	Asn			Ser	Pro	Phe	Pro		Lys	Glu	Leu		
69 70	Ala	Thr	Lys	Thr	245 Leu	Leu	His	Ser	Leu	250 Gly	Thr	Leu	Ala	Gln	255 Glu	Leu
7.1	_			260					265					270		
72 73	Phe	Ser	Met 275	Arg	Ser	Trp	Ser	Asp 280	Met	Arg	Gln	Glu	Val 285	Met	Phe	Leu
74 75	Thr	Asn 290	Val	Asn	Ser	Ser	Ser 295	Ser	Ser	Thr	Gln	Ile 300	Tyr	Gln	Ala	Val
76 77	Ser 305	Arg	Ile	Val	Cys	Gly 310	His	Pro	Glu	Gly	Gly 315	Gly	Leu	Lys	Ile	Lys 320
		Leu	Asn	Trp	Tyr		Asp	Asn	Àsn	Tyr		Ala	Leu	Phe	Gly	
79					325					330					335	
	Asn	Gly	Thr		Glu	Asp	Ala	Glu		Phe	Tyr	Asp	Asn		Thr	Thr
81	Pro	ጥላተ	Cvs	340 Asn	Asp	T.eu	Met	Lve	345 Asn	Leu	Glu	Ser	Ser	350 Pro	T.e.11	Ser
83		-1-	355	21011	шър	Leu	ricc	360	11511	БСи	OLU	501	365	110	·	501
84	Arg	Ile	Ile	Trp	Lys	Ala	Leu	Lys	Pro	Leu	Leu	Val	Gly	Lys	Ile	Leu
85		370					375					380				
		Thr	bro	Asp	Thr			Thr	Arg	Gln		Met	Ala	GLu	Val	
	385	Thr	Dho	Cln	C1	390	λ1 -	Wa l	Dho	His	395	Lou	Clu	Clv	Mot	400
89	цуз	1111	rne	GIII	405	neu	nia	Vai	FILE	410	wsb	ьец	GIU	СТУ	415	ıιρ
	Glu	Glu	Leu	Ser		Lys	Ile	Trp	Thr	Phe	Met	Glu	Asn	Ser		Glu
91				420					425					430		
92 93	Met	Asp	Leu 435	Val '	Arg	Met	Leu	Leu 440	Asp	Ser	Arg	Asp	Asn 445	Asp	His	Phe
	Trn	Glu		Gln	Leu	Δen	Glv		Δen	Trp	Thr	Δla		Asn	Tle	Val
95	115	450	0111	0111	ЦСи	wp	455	LCu	пър	P	1111	460	0111	пор	110	, 441
96	Ala		Leu	Ala	Lys	His	Pro	Glu	Asp	Val	Gln	Ser	Ser	Asn	Gly	Ser
97	465					470					475					480
	Val	Tyr	Thr	Trp	_	Glu	Ala	Phe	Asn	Glu	Thr	Asn	Gln	Ala		Arg
99			_		485				_	490					495	_
		· Ile	Ser	_		Met	Glu	і Суя			Leu	Asn	Lys			ı Pro
101			m1.	500				-1	505				~ 1	510		
102		ALS	1 Thr 515		ı vaı	. Trp	Leu	1 116 520		і гуз	Ser	Met	: GIU 525		ı Let	ı Asp
		Arc			• Trr	λla	Glu			Phe	ጥከተ	Glu			· Pro	Gly
105		530	-	,		21.1	535		. 1011			540		. 1111		011
106	Ser			ı Let	ı Pro	llis			Lys	Tyr	Lys			Met	. Asp	Ile
	545					550			-	-	555				-	560
108	_	Asr	Va]	l Glu	Arg 565		Asn	Lys	; Ile	Lys 570	-	Gly	Туг	Trp	Asp 575	Pro
		Pro	Arc	, Ala			Phe	e Glu	ı Asr			Туг	Val	. Trp		, Gly
	_		-		-				_		-	-		_	_	_

RAW SEQUENCE LISTING DATE: 04/09/2001 PATENT APPLICATION: US/09/526,193A TIME: 17:28:37

Input Set : A:\PTO.txt
Output Set: N:\CRF3\04092001\I526193A.raw

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112	Phe	Āla	Tyr	Leu	Gln	Asp	Val	Val	Glu	Gln	Ala	Ile	Ile	Arg	Val	Leu
113			595					600					605			
114	Thr	Gly	Thr	Glu	Lys	Lys	Thr	Gly	Val	Tyr	Met	Gln	Gln	Met	Pro	Tyr
115		610			-	_	615	-		•		620				•
116	Pro	Cys	Tyr	Val	Asp	Asp		Phe	Leu	Ara	Val	Met	Ser	Ara	Ser	Met
	625	•	-		•	630				5	635			5		640
		Leu	Phe	Met	Thr		Ala	Trp	Tle	Tvr		Val	Δla	Val	Tle	
119			,		645					650					655	
	Lvs	Glv	Tle	Va 1		Glu	Lvs	Glu	Δla		T.e.11	T.vc	Glu	Thr		Ara
121	_10	~ <u>1</u>		660	-1-		_10	014	665		Dou	1,0	o	670		211.9
	Tle	Met	Glv		Asn	Δsn	Ser	Ile		Trn	Dho	Ser	ጥኖኮ		Tla	Sor
123	110	1100	675	ь	P	21011	UCI	680	LCu	пр	1110	Jer	685	rne	116	361
	Ser	T.e.ii		Dro	LAU	Lan	Va 1	Ser	λla	Clv	Lou	LOU		Val	T10	Lou
125	561	690	116	110	пец	пец	695	261	міа	GIY	ьец	700	Vai	Val	116	цец
	Tuc		C1 11	λcn	Lou	T OV		Tyr	C02	200	Dwo		Wa 1	17-1	Dha	Wa l
	705	пец	СТУ.	ASII	Leu	710		ıyı	ser	ASP	715	ser	Val	Val	Pne	
		T 011	Con	17.0.1	Dha			1101	m la sa	T1_		01	0	Dh.	T	720
	PHE	reu	ser	۷ąт		v	vaı	Val	THE		Leu	GIU	Cys	Phe		11e
129	Com	m h sa	T	Dha	725		31	1	T	730				01	735	T1.
	ser	THE	reu		ser	Arg	Ala	Asn		Ala	Ата	Ата	Cys		GIY	11e
131	-1 -	m	D1	740	.				745		_	_	1	750	_	-1
	116	туг		Thr	Leu	туг	Leu	Pro	Tyr	vaı	ьeu	Cys		νта	Trp	GIN
133			755	<i>a</i> .1	n1.	m1		760	- 1	- .1		_	765	_	_	_
	Asp		vai	GTA.	Pne	Thr		Lys	ile	Phe	Ala		Leu	Leu	Ser	Pro
135		770	-,	a 1	-1	~ 1	775		_			780				
		Ала	Pne	СТА	Pne	_	Cys	Glu	ryr	Phe		Leu	Phe	GLU	GLu	
	785	- 1	.		a. 1	790	_	_	_	_,	795	_	_			800
	GTÄ	TTE	GIA	vaı		Trp	Asp	Asn	Leu		Glu	Ser	Pro	Val		Glu
139		a 1	D1		805	m1.	m)			810			_	_,	81.5	_,
	ASP	GTÄ	Pne		Leu	Thr	rnr	Ser		Ser	Met	Met	Leu		Asp	Thr
141	_,	_	_	820	1		_,	_	825					830		
	Phe	Leu		GLY	Val	Met	Thr	Trp	Tyr	He	Glu	Ala		Phe	Pro	GLY
143		_	835		_			840					845			
	GIn		GLY	He	Pro	Arg		Trp	Tyr	Phe	Pro		Thr	Lys	Ser	Tyr
145	_	850					855					860				
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1.47						870					875					880
	Lys	Arg	Ile	Ser		Ile	Cys	Met	Glu		Glu	Pro	Thr	His		Lys
149					885					890					895	
	Leu	Gly	Val		Ile	Gln	Asn	Leu		Lys	Val	Tyr	Arg	Asp	Gly	Met
151				900					905					910		
152	${ t Lys}$	Val	Ala	Val	Asp	Gly	Leu	Ala	Leu	Asn	Phe	Tyr	Glu	Gly	Gln	Ile
153			915					920					925			
154	Thr	Ser	Phe	Leu	Gly	His	Asn	Gly	Ala	Gly	Lys	Thr	Thr	Thr	Met	Ser
155		930					935					940				
156	Ile	Leu	Thr	Gly	Leu	Phe	Pro	${\tt Pro}$	Thr	Ser	Gly	Thr	Ala	Tyr	Ile	Leu
157						950					955					960
158	Gly	Lys	Asp	Ile	Arg	Ser	Glu	Met	Ser	Thr	Ile	Arg	Gln	Asn	Leu	Gly
159					965					970					975	

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Output Set: N:\CRF3\04092001\I526193A.raw

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162 163	His	Ile	Trp 995	Phe	Tyr	Ala	Arg	Leu 1000		Gly	Leu	Ser	Glu 1005		His	Val
	Lvs	Ala	Glu	Met	Glu	Gln	Met			Asp	Val	Gly	Leu	Pro	Ser	Ser
165		1010					1015					1020				
		Leu	Lys	Ser	Lys	Thr	Ser	Gln	Leu	Ser	Gly	Gly	Met	Gln	Arg	Lys
	102		-		-	1030		•			1035				_	1040
168	Leu	Ser	Val	Ala	Leu	Ala	Phe	Val	Gly	Gly	Ser	Lys	Val	Val	Ile	Leu
1.69					1045					1050					1055	
170	Asp	Glu	Pro	Thr	Ala	Gly	Val	Asp	${\tt Pro}$	Tyr	Ser	Arg	Arg	Gly	Ile	Trp
171				1060					1065					1070		
		Leu			Lys	Tyr	Arg			Arg	Thr	Ile			Ser	Thr
173			1075					1080					1085			
	His			Asp	Glu	Ala			Leu	Gly	Asp			Ala	Ile	Ile
175	_	1090		_		_	1095			_	_	1100		_	_	_
			GLY	Lys	Leu			Val	GLY	Ser	Ser		Phe	Leu	ьуs	
	110		a 1 .	m1.	a 1	1110		-	m1	•	1115		.		17- 1	1120
	GIn	ьeu	GTÅ	Thr	_		Tyr	ren	Thr		Val	rys	ьys	Asp		
179	Com	Carr	T	Com	1125		7	3	Com	1130		ml	37-x 1	Con	1135	
181	Ser	ser	ьeu	114(Cys	Arg	ASII	1145		Ser	THE	Val	1150		ьeu
	Tve	Tue	Clin			V=1	Car	Gln.			Ser	Aen	αſΛ			Gly
183	цуз	цуз	1155		261	Val	261	1160		261	261	чэь	1165		neu	GIY
	Ser	Asn			Ser	Agn	Thr			TTe	Asp	Va1			Tle	Ser
185		1170		014	501		1175				1106	1180				001
				Λrα	Lvs	His			Glu	λla	Λrg			Clu	Λsp	Ile
	1105				.	1190					1195					1200
100	Glv	llis	Glu	Leu	Thr	Tyr	Val.	Leu	Pro	Tyr	Glu	Ala	Ala	Lys	Glu	Gly
.i. & &					1205	, -				1210)			_	1215	5
189					120	,				121					121	
189	-			Glu			His	Glu	Ile		Asp	Arg	Leu	Ser		Leu
189 190 191	Ala	Phe	Val	1220	Leu)	Phe			1225	Asp	_	_		1230	Asp	
189 190 191	Ala	Phe	Val Ser	1220 Ser	Leu)	Phe		Ser	1225 Glu	Asp	Asp Thr	_	Glu	1230 Glu	Asp	
189 190 191 192 193	Ala Gly	Phe Ile	Val Ser 1235	1220 Ser	Leu) Tyr	Phe Gly	Ile	Ser 1240	1225 Glu)	Asp Thr	Thr	Leu	Glu 1245	1230 Glu	Asp) Ile	Phe
189 190 191 192 193 194	Ala Gly	Phe Ile Lys	Val Ser 1235 Val	1220 Ser	Leu) Tyr	Phe Gly	Ile Ser	Ser 1240 Gly	1225 Glu)	Asp Thr	_	Leu Glu	Glu 1245 Thr	1230 Glu	Asp) Ile	Phe
189 190 191 192 193 194 195	Ala Gly Leu	Phe Ile Lys 1250	Val Ser 1235 Val	1220 Ser 5 Ala	Leu) Tyr Glu	Phe Gly Glu	Ile Ser 1255	Ser 1240 Gly	1225 Glu) Val	Asp Thr Asp	Thr Ala	Leu Glu 1260	Glu 1245 Thr	1230 Glu Ser	Asp) Ile Asp	Phe Gly
189 190 191 192 193 194 195	Ala Gly Leu Thr	Phe Ile Lys 1250 Leu	Val Ser 1235 Val) Pro	1220 Ser 5 Ala	Leu) Tyr Glu Arg	Phe Gly Glu Arg	Ile Ser 1255 Asn	Ser 1240 Gly	1225 Glu) Val	Asp Thr Asp	Thr Ala Phe	Leu Glu 1260 Gly	Glu 1245 Thr	1230 Glu Ser	Asp) Ile Asp	Phe Gly Ser
189 190 191 192 193 194 195 196	Ala Gly Leu Thr 1269	Phe Ile Lys 1250 Leu	Val Ser 1235 Val) Pro	1220 Ser 5 Ala Ala	Leu) Tyr Glu Arg	Phe Gly Glu Arg 1270	Ile Ser 1255 Asn	Ser 1240 Gly S	1225 Glu) Val Arg	Asp Thr Asp	Thr Ala Phe 1275	Leu Glu 1260 Gly	Glu 1245 Thr) Asp	1230 Glu Ser Lys	Asp Ile Asp Gln	Phe Gly Ser 1280
189 190 191 192 193 194 195 196 197	Ala Gly Leu Thr 1269	Phe Ile Lys 1250 Leu	Val Ser 1235 Val) Pro	1220 Ser 5 Ala Ala	Leu Tyr Glu Arg Phe	Phe Gly Glu Arg 1270 Thr	Ile Ser 1255 Asn	Ser 1240 Gly S	1225 Glu) Val Arg	Asp Thr Asp Ala	Thr Ala Phe 1275 Ala	Leu Glu 1260 Gly	Glu 1245 Thr) Asp	1230 Glu Ser Lys	Asp Ile Asp Gln	Phe Gly Ser 1280 Ser
189 190 191 192 193 194 195 196 197	Ala Gly Leu Thr 1265 Cys	Phe Ile Lys 1250 Leu Leu	Val Ser 1235 Val) Pro	1220 Ser 5 Ala Ala Pro	Leu Tyr Glu Arg Phe 1285	Phe Gly Glu Arg 1270 Thr	Ile Ser 1255 Asn) Glu	Ser 1240 Gly Arg Asp	1225 Glu Val Arg	Asp Thr Asp Ala Ala	Thr Ala Phe 1275 Ala	Leu Glu 1260 Gly Asp	Glu 1245 Thr) Asp Pro	1230 Glu Ser Lys Asn	Asp Ile Asp Gln Asp 1295	Phe Gly Ser 1280 Ser
189 190 191 192 193 194 195 196 197 198 199 200	Ala Gly Leu Thr 1265 Cys	Phe Ile Lys 1250 Leu Leu	Val Ser 1235 Val) Pro	1220 Ser 5 Ala Ala Pro	Leu) Tyr Glu Arg Phe 1285	Phe Gly Glu Arg 1270 Thr	Ile Ser 1255 Asn) Glu	Ser 1240 Gly Arg Asp	1225 Glu Val Arg Asp	Asp Thr Asp Ala Ala 1290 Asp	Thr Ala Phe 1275 Ala	Leu Glu 1260 Gly Asp	Glu 1245 Thr) Asp Pro	1230 Glu Ser Lys Asn	Asp Ile Asp Gln Asp 1295 Met	Phe Gly Ser 1280 Ser
189 190 191 192 193 194 195 196 197 198 199 200 201	Ala Gly Leu Thr 1265 Cys Asp	Phe Ile Lys 1250 Leu Leu Ile	Val Ser 1235 Val) Pro Arg	1220 Ser Ala Ala Pro Pro	Leu) Tyr Glu Arg Phe 1285 Glu	Gly Glu Arg 1270 Thr Ser	Ser 1255 Asn Glu Arg	Ser 1240 Gly Arg Asp	1225 Glu Val Arg Asp Thr	Asp Thr Asp Ala Ala 1290 Asp	Thr Ala Phe 1275 Ala) Leu	Leu Glu 1260 Gly Asp	Glu 1245 Thr) Asp Pro	1230 Glu Ser Lys Asn Gly 1310	Asp Ile Asp Gln Asp 1295 Met	Phe Gly Ser 1280 Ser Asp
189 190 191 192 193 194 195 196 197 198 199 200 201 202	Ala Gly Leu Thr 1265 Cys Asp	Phe Ile Lys 1250 Leu Leu Ile	Val Ser 1235 Val Pro Arg Asp	1220 Ser Ala Ala Pro Pro 1300 Ser	Leu) Tyr Glu Arg Phe 1285 Glu	Gly Glu Arg 1270 Thr Ser	Ser 1255 Asn Glu Arg	Ser 1240 Gly Arg Asp Glu Lys	1225 Glu Val Arg Asp Thr 1305 Gly	Asp Thr Asp Ala Ala 1290 Asp	Thr Ala Phe 1275 Ala	Leu Glu 1260 Gly Asp	Glu 1245 Thr) Asp Pro Ser	1230 Glu Ser Lys Asn Gly 1310 Gln	Asp Ile Asp Gln Asp 1295 Met	Phe Gly Ser 1280 Ser Asp
189 190 191 192 193 194 195 196 197 198 199 200 201 202 203	Ala Gly Leu Thr 1265 Cys Asp Gly	Phe Ile Lys 1250 Leu Leu Ile Lys	Val Ser 1235 Val Pro Arg Asp Gly 1315	1220 Ser Ala Ala Pro Pro 1300 Ser	Leu Tyr Glu Arg Phe 1285 Glu Tyr	Phe Gly Glu Arg 1270 Thr Ser	Ser 1255 Asn Glu Arg	Ser 1240 Gly Arg Asp Glu Lys 1320	1225 Glu Val Arg Asp Thr 1305 Gly	Asp Thr Asp Ala Ala 1290 Asp	Thr Ala Phe 1275 Ala Leu Lys	Leu Glu 1260 Gly Asp Leu Leu	Glu 1245 Thr) Asp Pro Ser Thr 1325	1230 Glu Ser Lys Asn Gly 1310 Gln	Asp Ile Asp Gln Asp 1295 Met Gln	Phe Gly Ser 1280 Ser Asp
189 190 191 192 193 194 195 196 197 198 199 200 201 202 203	Ala Gly Leu Thr 1265 Cys Asp Gly	Phe Ile Lys 1250 Leu Leu Ile Lys	Val Ser 1235 Val Pro Arg Asp Gly 1315 Ala	1220 Ser Ala Ala Pro Pro 1300 Ser	Leu Tyr Glu Arg Phe 1285 Glu Tyr	Phe Gly Glu Arg 1270 Thr Ser	Ser 1255 Asn Glu Arg	Ser 1240 Gly Arg Asp Glu Lys 1320 Arg	1225 Glu Val Arg Asp Thr 1305 Gly	Asp Thr Asp Ala Ala 1290 Asp	Thr Ala Phe 1275 Ala) Leu	Leu Glu 1260 Gly Asp Leu Leu	Glu 1245 Thr) Asp Pro Ser Thr 1325 Arg	1230 Glu Ser Lys Asn Gly 1310 Gln	Asp Ile Asp Gln Asp 1295 Met Gln	Phe Gly Ser 1280 Ser Asp
189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205	Ala Gly Leu Thr 1265 Cys Asp Gly Phe	Phe Ile Lys 1250 Leu Ile Lys Val 1330	Val Ser 1235 Val Pro Arg Asp Gly 1315 Ala	1220 Ser Ala Ala Pro Pro 1300 Ser	Leu) Tyr Glu Arg Phe 1285 Glu) Tyr Leu	Phe Gly Glu Arg 1270 Thr Ser Gln	Ser 1255 Asn Glu Arg Val Lys 1335	Ser 1240 Gly Arg Asp Glu Lys 1320 Arg	1225 Glu Val Arg Asp Thr 1305 Gly	Asp Thr Asp Ala 1290 Asp Trp Leu	Thr Ala Phe 1275 Ala Leu Lys	Leu Glu 1260 Gl.y Asp Leu Leu Ala 1340	Glu 1245 Thr) Asp Pro Ser Thr 1325 Arg	1230 Glu Ser Lys Asn Gly 1310 Gln Arg	Asp Ile Asp Gln Asp 1295 Met Gln Ser	Phe Gly Ser 1280 Ser Asp Gln Arg
189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206	Ala Gly Leu Thr 1265 Cys Asp Gly Phe	Phe Ile Lys 1250 Leu Ile Lys Val 1330 Gly	Val Ser 1235 Val Pro Arg Asp Gly 1315 Ala	1220 Ser Ala Ala Pro Pro 1300 Ser	Leu) Tyr Glu Arg Phe 1285 Glu) Tyr Leu	Phe Gly Glu Arg 1270 Thr Ser Gln	Ser 1255 Asn Glu Arg Val Lys 1335 Ile	Ser 1240 Gly Arg Asp Glu Lys 1320 Arg	1225 Glu Val Arg Asp Thr 1305 Gly	Asp Thr Asp Ala 1290 Asp Trp Leu	Thr Ala Phe 1275 Ala Leu Lys	Leu Glu 1260 Gly Asp Leu Leu Ala 1340 Val	Glu 1245 Thr) Asp Pro Ser Thr 1325 Arg	1230 Glu Ser Lys Asn Gly 1310 Gln Arg	Asp Ile Asp Gln Asp 1295 Met Gln Ser	Phe Gly Ser 1280 Ser Asp Gln Arg
189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207	Ala Gly Leu Thr 1265 Cys Asp Gly Phe Lys 1345	Phe Ile Lys 1250 Leu Ile Lys Val 1330 Gly	Val Ser 1235 Val Pro Arg Asp Gly 1315 Ala	1220 Ser 5 Ala Ala Pro 1300 Ser 5 Leu	Leu Tyr Glu Arg Phe 1285 Glu Tyr Leu Ala	Gly Glu Arg 1270 Thr Ser Gln Trp Gln 1350	Ser 1255 Asn Glu Arg Val Lys 1335 Ile	Ser 1240 Gly Arg Asp Glu Lys 1320 Arg	1225 Glu Val Arg Asp Thr 1305 Gly Leu Leu	Asp Thr Asp Ala 1290 Asp Trp Leu Pro	Thr Ala Phe 1275 Ala Leu Lys Ile Ala	Leu Glu 1260 Gly Asp Leu Leu Ala 1340 Val	Glu 1245 Thr) Asp Pro Ser Thr 1325 Arg)	1230 Glu Ser Lys Asn Gly 1310 Gln Arg	Asp Ile Asp Gln Asp 1295 Met Gln Ser Cys	Phe Gly Ser 1280 Ser Asp Gln Arg Ile 1360

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210	Leu	Glu	Leu	Gln	Pro	Trp	Met	Tyr	Asn	Glu	Gln	Tyr	Thr	Phe	Val	Ser
211				1380		-		_	138			-		1390		
212	Asn	Asp	Ala	Pro	Glu	Asp	Thr	Gly	Thr	Leu	Glu	Leu	Leu	Asn	Ala	Leu
213			139			_		140					140			
214	Thr	Lys	Asp.	Pro	Gly	Phe	Gly	Thr	Arg	Cys	Met	Glu	Gly	Asn	Pro	Ile
215		141			_		141		•	-		1420				
216	Pro	Asp	Thr	Pro	Cys	Gln	Ala	Gly	Glu	Glu	Glu	Trp	Thr	Thr	Ala	Pro
	142					1430					1439					1440
218	Val	Pro	Gln	Thr	Ile	Met	Asp	Leu	Phe	Gln	Asn	Gly	Asn	Trp	Thr	Met
219					144					1450		_		_	145	
220	Gln	Asn	Pro	Ser	Pro	Ala	Cys	Gln	Cys	Ser	Ser	Asp	Lys	Ile	Lys	Lys
221				1460)				146	5			_	1470)	_
222	Met	Leu	Pro	Val	Cys	Pro	Pro	Gly	Ala	Gly	Gly	Leu	Pro	Pro	Pro	Gln
223			147					1480					1485			•
224	Arg	Lys	Gln	Asn	Thr	Ala	Asp	Ile	Leu	Gln	Asp	Leu	Thr	Gly	Arg	Asn
225		1490)				149	5				1500)			
226	Ile	Ser	Asp	Tyr	Leu	Val	Lys	Thr	Tyr	Val	Gln	Ile	Ile	Ala	Lys	Ser
227	150	5				1510)				1515	5				1520
228	Leu	Lys	Asn	Lys	Ile	Trp	Val	Asn	Glu	Phe	Arg	Tyr	Gly	Gly	Phe	Ser
229	. 4				1525	5				.1530)				1535	5
230.	Leu	Gly	Val	Ser	Λsn	Thr	Gln	Λla	Leu	Pro	Pro	Ser	Gln	Glu	Val	Asn
231				1540					154					1550		
232	Asp	Ala	Ile	Lys	Gln	Met	Lys	Lys	Ilis	Leu	Lys	Leu	Ala	Lys	Asp	Ser
233			1555					1560					1565			
234	Ser	Ala	Asp	Arg	Phe	Leu	Asn	Ser	Leu	Gly	Arg	Phe	Met	Thr	Gly	Leu
235		1570					1575					1580				
236	Asp	Thr	Arg	Asn	Asn	Val	Lys	Val	Trp	Phe	Asn	Asn	Lys	Gly	Trp	His
	1.58					1590					1.595					1600
	Ala	Ile	Ser	Ser			Asn	Val	Ile	Asn	Asn	Ala	Ile	Leu	Arg	Ala
239					160					1610					1615	
	Asn	Leu	Gln			Glu	Asn	Pro			Tyr	Gly	Ile	Thr	Ala	Phe
241				1620			•		1625					1630		
	Asn	His			Asn	Leu	Thr	_		Gln	Leu	Ser	Glu	Val	Ala	Leu
243			1635					1640					1645			
	Met	Thr	Thr	Ser	Val	Asp	Val	Leu	Val	Ser	Ile			Ile	Phe	Ala
245		1650	-				1655					1660	•			
		Ser	Phe	Val	Pro			Phe	Val	Val			Tle	Gln	Glu	-
	166					1670					1675					1680
	Val	Ser	Lys	Ala			Leu	Gln	Phe			Gly	Val	Lys	Pro	Val
249		•			1685	-				1690					1695	
	Ile	Tyr	Trp			Asn	Phe	Vāl			Met	Cys	Asn	Тут	Val	Val
251				1700					1705					1710		
	Pro	Ala			Val	Ile	Ile			Ile	Cys	Phe			Lys	Ser
253			1715					1720					1725			
		Val		Ser	Thr	Asn			Val	Leu	Ala			Leu	Leu	Leu
255		1730					1735					1740				
		Gly	Trp	Ser	Ile			Leu	Met	Tyr			Ser	Phe	Val	Phe
257	171	5				1750)				1755	5				1760
~~.	1/4.	,														



Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/526,193A

DATE: 04/09/2001 TIME: 17:28:38

Input Set : A:\PTO.txt

Output Set: N:\CRF3\04092001\I526193A.raw

L:730 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:1004 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
L:1524 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:2083 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:2084 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:2085 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:2259 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39
L:2400 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54
L:2469 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:61
L:2546 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:69